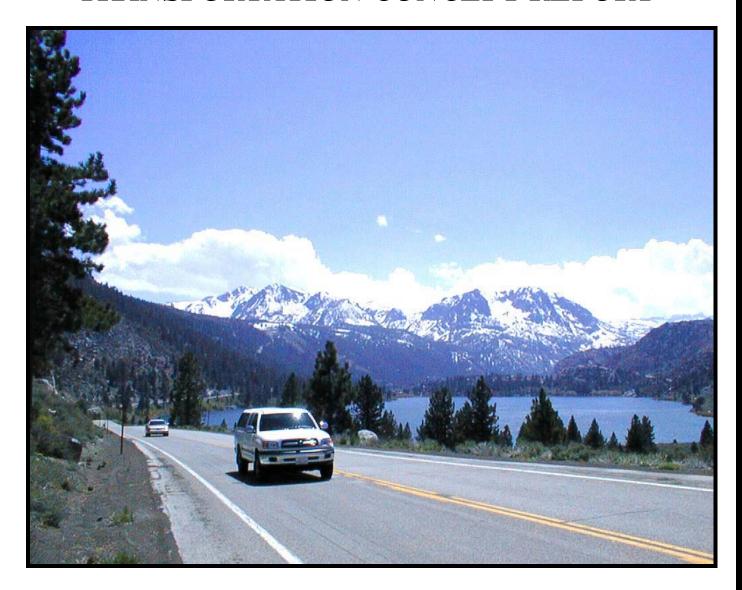
STATE ROUTE 158 TRANSPORTATION CONCEPT REPORT



CALTRANS DISTRICT 9

Office of System Planning 2004

STATE ROUTE 158 TRANSPORTATION CONCEPT REPORT

PREPARED BY **CALTRANS DISTRICT 9** OFFICE OF SYSTEM PLANNING

2004

APPROVAL:

Deputy Director

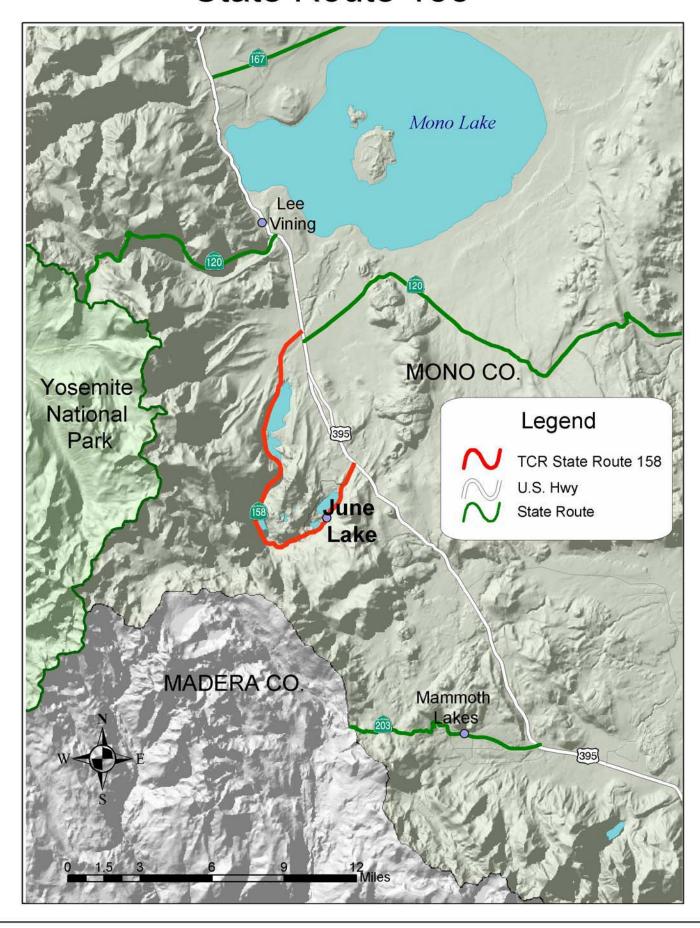
Planning and Programming, District 9

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State Route 158



State Route 158 Transportation Concept Report

INTRODUCTION

The Transportation Concept Report (TCR) is a long-range planning document that describes the current characteristics of the transportation corridor and establishes a twenty-year planning concept. The TCR defines the California Department of Transportation (Caltrans) goals for the development of the transportation corridor in terms of Level of Service (LOS) and type of facilities, and broadly identifies the improvements needed to reach those goals.

The District 9 Office of System Planning in consultation with local and regional agencies, as well as adjacent counties and Caltrans Districts has prepared this TCR. All information in this TCR is subject to revision as conditions change and new information is obtained. Consequently, the nature and the size of identified improvements may change as they move through the project development and environmental analysis stages.

ROUTE SYNOPSIS

This Transportation Concept Report covers State Route (SR) 158 in California, which is locally known as the June Lake Loop. The length of SR 158 is 15.83 miles (25.47 kilometers).

SR 158 provides the only paved connection from US 395, the principal corridor of Inyo and Mono Counties, to the community of June Lake and recreation areas along SR 158. Predominantly, it serves recreation enthusiasts. Also, it serves the residents, merchants, and public utility facilities along its length.

ROUTE HISTORY

State Route (SR) 158 became a part of the State Highway System in 1933. It was one of nine route segments added to the State Highway System in Inyo and Mono Counties as part of the Breed Act of 1933. Prior to 1964, SR 158 was designated as SR 111.

Historically, the section of SR 158 from PM 1.1 (Kilometer Post (KP) 1.7) and PM 2.2 (KP 3.6) was closed for several hours at a time when snow avalanches blocked the traveled way during the winter season. Beginning in 1982, Caltrans began using explosive devices to reduce the unpredicted occurrence of avalanche snow blocking SR 158 northeast of the Community of June Lake. The explosive devices dislodge snow in known avalanche start zones before the snow accumulates to avalanche-potential amounts. The range of use of the avalanche explosive devices is from 4 to 25 days per winter.

ROUTE DESCRIPTION

SR 158 is functionally classified as a Major Collector, as it provides access from US 395 to the community of June Lake, the June Mountain Ski Area, and Inyo National Forest land. The elevation of SR 158 varies from 7,789 ft (2,374 m) at PM 1.08 (KP 1.74) to 6,868 ft (2,093 m) at PM 15.84 (KP 25.48). The route is eligible to become a California Scenic Highway due to the spectacular scenery along the entire route.

PRESENT AND FUTURE OPERATING CONDITIONS

The primary issues of concern for SR 158 are snow removal, avalanche control, and a lack of usable shoulders. Improvements to accommodate bicycle travel should also be considered. Curve improvements, turnouts, scenic pullouts, shoulder widening, and improvements for bicycle users will be considered as funding and environmental constraints allow over the next twenty-year period.

EXISTING AND FUTURE DEFICIENCIES

Based on Highway Capacity Manual calculations, SR 158 is currently operating at a Level of Service (LOS) B, and is expected to continue at LOS B for the next twenty years (except at locations constrained by geometric features, speed restrictions, and advisory speeds). Capacity increasing projects are not being proposed for SR 158, as they are not warranted at this time and the need is not anticipated in the twenty-year planning period. The ultimate concept for SR 158 is a Two-Lane Conventional Highway with paved shoulders where geometric and environmental conditions permit. Safety and operational improvements may be implemented but will have to take into account scenic and environmental considerations.

MULTIMODAL OPPORTUNITIES

As a result of small-radius curves and locations of restricted lane width, buses and motorhomes 40 ft (12.2 meters) and greater in length are prohibited on SR 158 from the west intersection with Northshore Drive (opposite the June Mountain Ski Area) at PM 3.85 (KP 6.1) to the north end of the Route at US 395 at PM 15.8 (KP 25.4). Bicycles are allowed, and according to the Sierra Cycling Group, bicycles are quite prevalent on all portions of SR 158. Seasonal, once-a-day bus service operated by the Yosemite Area Rapid Transit System (YARTS) is available connecting the June Lake area with Mammoth Lakes, Lee Vining, and Yosemite National Park. Inyo-Mono Transit operates the Carson Ridgecrest Eastern Sierra Transit (CREST) system, which provides interregional transit services connecting eastern Kern, Inyo, and Mono counties with the greater Carson City and Reno, Nevada area.

LOCAL AREA PLANNING

The June Lake area is an unincorporated community within Mono County; therefore the planning for the area is addressed in the Mono County General Plan. In regard to unincorporated communities, Mono County Area Plans are adaptations of the County General Plan that govern land use in specified community areas and addresses more localized needs of unincorporated communities.

As identified in the June Lake Area Plan of 1991, State Route 158 is the Primary Arterial for the June Lake area. The Circulation Element of the 1991 June Lake Area Plan focuses on improving winter access, upgrading existing roads, and encouraging the development of alternative transportation modes. The main goal in the Circulation Element is to provide and maintain a circulation system and related facilities that will promote the orderly, safe, and efficient movement of people, goods, and services, while ensuring that the mountain village character of the June Lake area is preserved.

The June Lake Area Plan assumes an annual population growth rate of 1.3%. However, area traffic is expected to increase due to improvements to June Mountain and associated ski area developments.

The June Lake Area Plan further identifies the following items in the Circulation Element:

- Work with Caltrans to construct, where feasible, roadside turnouts.
- Develop a bypass collector street connecting with SR 158 on both ends of the Village (Northshore Drive was completed in 1997, which satisfies this item).
- Work with Caltrans and the U.S. Forest Service to improve parking facilities near the more popular day-use areas and near backcountry trailheads.

The 2003 June Lake Loop Trail Plan is an addendum to the June Lake Area Plan. The 2003 Trail Plan retains most of the trails identified in the 1991 Area Plan and emphasizes the fundamental concepts of public access. The Trail Plan identifies SR 158 as a corridor used by bicyclists and proposes a number of modifications within the highway right-of-way for further study. Some modifications, in order to accommodate bicycle travel are not likely to occur without major renovation to the current corridor, however bicycle-warning signs may be justified upon further study. Additionally, the Trail Plan offers a number of off-highway options for trail development in order to minimize the use of SR 158 by pedestrians and equestrians.

COMMUNITY ISSUES & PUBLIC OUTREACH

Improvements to SR 158 will be planned using a collaborative, interdisciplinary approach involving all stakeholders. This approach will attempt to integrate and balance

multimodal, community character, aesthetic, historic, and environmental values with regard to transportation safety, maintenance, and performance goals.

An Open House event was held to gather public input for this document. The event was held at the June Lake Community Center on September 24, 2003 from 5:00 p.m. to 8:00 p.m. The pubic input received for route improvements at the event is incorporated into this document under the Route Improvement Recommendations sections of each Segment Fact Sheet.

STATE ROUTE 158 CONCEPT SUMMARY

	Segi	Segment	Travell	Travelled Lanes—Access	Access ¹		Leve	Level of Service ² , LOS*	e², LOS*		
	7	Location					Year				Fact
0		Post limits:	Current	Concept	Ultimate				Concept	Ultimate	Page
	County	Mile (Kilometer)				2004	2014	2024			Numbers
1	Mno	0.00 to 1.08 (0.00 to 1.74)	2 – C	2 – C	2 – C	В	В	В	Э	2	7 and 8
2	Mno	1.08 to 3.85 (1.74 to 6.20)	2-C	2 – C	2 – C	В	В	В	Э	Э	9 and 10
3	Mno	3.85 to 5.97 (6.20 to 9.61)	2 – C	2 – C	2 – C	В	В	В	Э	Э	11 and 12
4	Mno	5.97 to 25.48 (9.61 to 25.49)	2 – C	2 – C	2 – C	В	В	В	O	S	13 and 14

- Access types: C ≡ conventional—minimal access limitation; E ≡ expressway—significant, but not total, access limitation/control; F ≡ freeway—total access control
- The present and years 2004, 2014, and 2024 levels of service and volume-capacity ratios are calculated using the specific-grade formulation in Chapter 8 of the Third Edition of the HIGHWAY CAPACITY MANUAL [2] ۲i

*Level of service (LOS) is a quality measure describing operational conditions within a traffic stream. Generally, Level of Service is measured in terms of speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. The LOS calculations in this report were based on the year 2000 update of the Highway Capacity Manual. Changes in the year 2000 Highway Capacity Manual include categorizing twolane highways into two groups; Class I and Class II facilities.

routes, primary arterials connecting major traffic generators, daily commuter routes, or primary links in state or national highway networks generally are assigned to Class I. LOS calculations for Class I facilities includes the use of both percent time spent following and average travel Class I facilities are two-lane highways in which motorists expect to travel at relatively high speeds. Two-lane highways that are major intercity

access routes to Class I facilities, serve as scenic or recreational routes that are not primary arterials, or pass through rugged terrain generally are Class II facilities are two-lane highways in which motorists do not necessarily expect to travel at high speeds. Two-lane highways that function as assigned to the Class II category. LOS calculations for Class II facilities utilize only percent time spent following.

Caltrans District 9 has categorized SR 158 as a Class II facility.

 Length in km
 1.74
 Length mi:
 1.08

 KP Back
 0.00
 Back PM
 0.00

 KP Ahead
 1.74
 Ahead PM
 1.08

Present Facility Two-Lane Conventional

Present LOS B

Concept Facility Two-Lane Conventional

Concept LOS C

Ultimate Facility Two-Lane Conventional

Segment Location



Segment Description

Segment one begins at June Lake Junction (the south intersection of June Lake Loop with US 395). The segment traverses the June Lake Loop to its east intersection with Northshore Drive, where the segment ends. Primarily, segment one serves recreation users, business owners and suppliers. The segment is open throughout the year. Typically during the winter and early spring, segment one, segment two, segment three and/or Northshore Drive, comprise the only open paved roadway connecting U.S. 395 with the June Lake community and surrounding recreational area. Segment one, a two-lane conventional facility, traverses rolling terrain, and is characterized by a straight horizontal alignment. The elevation of this segment ranges from 7,644 ft (2,330 m) at PM 0.4 (KP 0.7) to 7,776 ft (2,370 m) at PM 1.10 (KP 1.77). The maximum grade for this segment is 6 percent, which occurs 0.06 mi (1.0 km) east of Northshore Drive.

Route Concept Improvement Recommendations

- 1). Increase shoulder widths to 8.0 ft (2.4 m) where feasible, and include rumble strips in the shoulder areas to enhance safety for bicyclists and increase clear recovery zones.
- 2). Grade area beyond paved shoulders to provide additional clear area where feasible considering environmental and geometric constraints.
- 3). Improve sight distance and alignment for both northbound and southbound travelers approaching the south intersection with Northshore Drive.

Programmed Projects

No Programmed projects are reported at the time of publication. A project initiation document is currently being prepared to provide and improve pedestrian and bicycle facilities in a safe and complementary way with other vehicle traffic while utilizing the principals of context sensitivity.

Functional Class	sificatio	on: Major Collector	r	Roadway Widths	Un	its
High	way Ne	etwork Affiliation			Feet	Meters
National Hwy System	No	Scenic Highway	Eligible	Average Median Width	0	0
California Freeway _ Expressway System	No	National Truck Network	Kingpin to Rear Axle < 40 ft in Length	Average Shoulder Width	2	0.6
STRAHNET	No	Life Line	No	Average Lane Width	12	3.6
Regionally Significant	No	IRRS	Non IRRS			

County: Mono Route: 158 Segment: 1 Page: 7

RTPA/COG/MPO

Mono County LTC PO Box 347 Mammoth Lakes, CA 93546-0347

Transit Service/ Modal Options

Yosemite Area Rapid Transit System is available seasonally connecting the June Lake area with Mammoth Lakes, Lee Vining, and Yosemite National Park. Inyo Mono Transit operates the CREST system, which provides interregional transit services connecting eastern Kern, Inyo, and Mono counties with the greater Carson City and Reno, Nevada areas.

Land Use

Except for the northwest corner of the intersection of SR 158 with US 395, land use adjacent to this segment is open space recreational. The land is administered by the US Forest Service. On the northwest corner of SR 158 and US 395, land use is a commercial gasoline service station, snack shop, and recreational vehicle rental business.

Air Quality Comments

This segment is classified by the State of California Air Resources Board for Non-Attainment Ozone, the source of Ozone is transported from the San Joaquin Valley air basin. For Particulate Matter 10, this segment is Moderate Non-Attainment.

Environmental Concerns

The Federal and/or State protected species that may be impacted within this segment are: the Northern Goshawk, Swainson's Hawk, Prairie Falcon, Mono Lake Lupine, Mono Milk-Vetch. Many of these species have been reported within the area and all proposed projects that impact undisturbed areas will require surveys to verify their existence within the area of work. Other identified areas of environmental concern are the scenic resources within and around this segment of roadway.

Right of Way Comments

The DOT right of way easement is on U.S. Forest Service land.

Traffic Analysis

There were 7 accidents in the 10-year period for this segment of SR 158. The accident rate is about 60% compared to the statewide average. One fatality was recorded as a motorist's ran off the road and hit a tree. The nearest slopes and trees are about 6 ft (1.8 m) from the edge of traveledway. Wider clear zones are desirable and sight distance and geometry at the Northshore Drive intersection should be improved.

ge Daily Traffic	Design I	lour Volumes	Volume to Ca	pacity Ratio	Level of	Service
1550	200	4 281	2004	0.13	2004	В
1630	201	4 295	2014	0.13	2014	В
1710	202	4 310	2024	0.14	2024	В
per Million Vehicle N	Wile	Percent Ann	ual Traffic Grow	rth	Percent Vehicle	e Volume
	0.50	AnnualTraffic Grov	wth (0-10 yrs)	0.5%	Trucks	4%
Statewide Expected	0.96	Annual Traffic Gro	wth (10-20 yrs)	0.5%	RV's	5%
ate	1.16	Directional Split	50/50		Buses	1%
Expected Rate	1.91	Terrain	Rolling			
	1550 1630 1710 per Million Vehicle I	1550 200 1630 201 1710 202 per Million Vehicle Mile 0.50 statewide Expected 0.96 ate 1.16	1550 2004 281	1550 2004 281 2004 2014 295 2014 20	1550 2004 281 2004 0.13 1630 2014 295 2014 0.13 1710 2024 310 2024 0.14 2024 0.14 2024 0.14 2024 0.50 Annual Traffic Growth (0-10 yrs) 0.5% 2024 202	1550 2004 281 2004 0.13 2004 1630 2014 295 2014 0.13 2014 2014 2014 2024 2014 2024 2014 2024 20

County: Mono Route: 158 Segment: 1 Page: 8

 Length in km
 4.45
 Length mi:
 2.76

 KP Back
 1.74
 Back PM
 1.08

 KP Ahead
 6.20
 Ahead PM
 3.85

Present Facility Two-Lane Conventional

Present LOS B

Concept Facility Two-Lane Conventional

Concept LOS C

Ultimate Facility Two-Lane Conventional

Segment Location



Segment Description

Segment two begins at the east intersection of Northshore Drive and ends at the west intersection of Northshore Drive. This segment primarily serves the Central Business District for the Community of June Lake and has a core pedestrian zone through the area. This segment is open year round, except when avalanche control is implemented between the south intersection with Northshore Drive and Big Rock Road. The elevation for this segment varies from 7,550 ft (2,300 m) to 7,776 ft (2,370 m).

Route Concept Improvement Recommendations

- 1). Extend existing guardrail, as appropriate, near Gull Lake Road.
- 2). Widen shoulder widths 4-6 ft (1.2-1.8 m) where feasible and include rumble strips in the shoulder areas to enhance the clear zone recovery area and improve bicycle travel.
- 3). Enlarge and pave pullouts in the vicinity of Northshore Drive.

Programmed Projects

No Programmed projects are reported at the time of publication. A project initiation document is currently being prepared to provide and improve pedestrian and bicycle facilities in a safe and complementary way with other vehicle traffic while utilizing the principals of context sensitivity.

Functional Class	sificatio	on: Major Collector	r	Roadway Widths	Un	its
High	way Ne	etwork Affiliation			Feet	Meters
National Hwy System	No	Scenic Highway	Eligible	Average Median Width	0	0
California Freeway _ Expressway System	No	National Truck Network	Kingpin to Rear Axle < 40 ft in Length	Average Shoulder Width	3	0.9
STRAHNET	No	Life Line	No	Average Lane Width	12	3.6
Regionally Significant	No	IRRS	Non IRRS			

County: Mono Route: 158 Segment: 2 Page: 9

RTPA/COG/MPO

Mono County LTC PO Box 347 Mammoth Lakes, CA 93546-0347

Transit Service/ Modal Options

Yosemite Area Rapid Transit System is available seasonally connecting the June Lake area with Mammoth Lakes, Lee Vining, and Yosemite National Park. Inyo Mono Transit operates the CREST system, which provides interregional transit services connecting eastern Kern, Inyo, and Mono counties with the greater Carson City and Reno, Nevada areas.

Land Use

Land use adjacent to Segment 2 is recreational, including camping, fishing, hiking, skiing, snowmobile access, and swimming; commercial, primarily including resorts, restaurants, realtors, suppliers of general goods, and suppliers of recreational services; and residential, both seasonal and year around.

Air Quality Comments

This segment is classified by the State of California Air Resources Board for Non-Attainment Ozone, the source of Ozone is transported from the San Joaquin Valley air basin. For Particulate Matter 10, this segment is Moderate Non-Attainment.

Environmental Concerns

The Federal and/or State protected species that may be impacted within this segment are: the Northern Goshawk, Swainson's Hawk, Willow Flycatcher, Sierra Nevada Mountain Beaver, Prairie Falcon, Mono Lake Lupine, Mono Milk-Vetch, and Slender-leaved pondweed. Many of these species have been reported within the area and all proposed projects that impact undisturbed areas will require surveys to verify their existence within the area of work. Other environmental concerns are water quality, stream crossings, the protection of both riparian and wetland communities, community impacts, and protection of the scenic resources within and around this segment of roadway.

Right of Way Comments

Segment 2 is on land administered by the US Forest Service (USFS), on land held in fee by the State, and on private property. Occupancy of USFS land is by DOT easement, occupancy of private land is by easement. Avalanche Prevention devices are on USFS land under a special use permit.

Traffic Analysis

This segment includes the community of June Lake. There were 26 accidents in the 10-year period. 14 of the 26 accidents were within the community and nearly all were multi-vehicle. The accident rate in the community of June Lake is about the statewide average. In the vicinity of PM 1.5 (KP 0.5) unpaved pullouts are heavily used, and as a result, should be enlarged and paved wherever possible.

	High	way Traffic	Volumes and Leve	l of Service			
Annual Avera	age Daily Traffic	Design I	Hour Volumes	Volume to Ca	pacity Ratio	Level of	Service
2004	1550	200	281	2004	0.13	2004	В
2014	1630	201	4 295	2014	0.13	2014	В
2024	1710	202	310	2024	0.14	2024	В
Accident Rate	per Million Vehicle l	Mile	Percent Ann	ual Traffic Grow	rth .	Percent Vehicle	e Volume
Fatality + Injury		0.55	AnnualTraffic Gro	wth (0-10 yrs)	0.5%	Trucks	4%
Fatality + Injury	Statewide Expected	0.96	Annual Traffic Gro	owth (10-20 yrs)	0.5%	RV's	5%
Total Accident F	Rate	2.05	Directional Split	53/47		Buses	1%
Total Statewide	Expected Rate	1.93	Terrain	Rolling			

County: Mono Route: 158 Segment: 2 Page: 10

 Length in km
 3.41
 Length mi:
 2.12

 KP Back
 6.20
 Back PM
 3.85

 KP Ahead
 9.61
 Ahead PM
 5.97

Present Facility Two-Lane Conventional

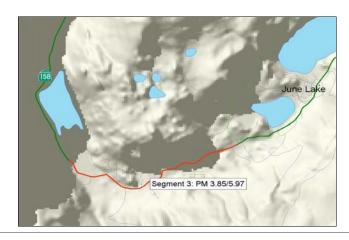
Present LOS B

Concept Facility Two-Lane Conventional

Concept LOS C

Ultimate Facility Two-Lane Conventional

Segment Location



Segment Description

Segment three begins at the west intersection of Northshore Drive and ends at the winter closure gate near the power substation. Segment 3 primarily serves recreation users to the June Lake Mountain Ski area in the winter, and trailheads and lakes during the summer. The segment is open year round and is a winding two-lane facility. The elevation for this segment varies from 7,217 ft (2,200 m) at PM 5.87 (KP 9.45) to 7,539 at PM 3.85 (KP 6.20). Pedestrian, bicycle, and equestrian traffic converges on SR 158 between Yost Creek and the Rodeo grounds.

Route Concept Improvement Recommendations

- 1). Upgrade the drainage system where necessary.
- 2). Widen shoulder widths to 4ft (1.2 m) where environmental and geographical constraints allow.

Programmed Projects

No Programmed projects are reported at the time of publication. A project initiation document is currently being prepared to provide and improve pedestrian and bicycle facilities in a safe and complementary way with other vehicle traffic while utilizing the principals of context sensitivity.

Functional Class	sificatio	on: Major Collector	r	Roadway Widths	Un	its
High	way Ne	etwork Affiliation			Feet	Meters
National Hwy System	No	Scenic Highway	Eligible	Average Median Width	0	0
California Freeway _ Expressway System	No	National Truck Network	Kingpin to Rear Axle < 30 ft in Length	Average Shoulder Width	2	0.7
STRAHNET	No	Life Line	No	Average Lane Width	11	3.4
Regionally Significant	No	IRRS	Non IRRS			

County: Mono Route: 158 Segment: 3 Page: 11

RTPA/COG/MPO

Mono County LTC PO Box 347 Mammoth Lakes, CA 93546-0347

Transit Service/ Modal Options

Seasonal once-a-day bus service operated by the Yosemite Area Rapid Transit System is available connecting the June Lake area with Mammoth Lakes, Lee Vining, and Yosemite National Park.

Land Use

Land use adjacent to Segment 3 is recreational, including camping, fishing, hiking, skiing, snowmobile access, and swimming; commercial, primarily including resorts, restaurants, suppliers of recreational services, and an electric-power-generating substation; and residential, both seasonal and year-around.

Air Quality Comments

This segment is classified by the State of California Air Resources Board for Non-Attainment Ozone, the source of Ozone is transported from the San Joaquin Valley air basin. For Particulate Matter 10, this segment is Moderate Non-Attainment.

Environmental Concerns

The Federal and/or State protected species that may be impacted within this segment are: the Northern Goshawk, Swainson's Hawk, Willow Flycatcher, Sierra Nevada Mountain Beaver, Prairie Falcon, Mono Lake Lupine, Mono Milk-Vetch, and Slender-leaved pondweed. Many of these species have been reported within the area and all proposed projects that impact undisturbed areas will require surveys to verify their existence within the area of work. Other environmental concerns are water quality, stream crossings, the protection of both riparian and wetland communities, community impacts, and protection of the scenic resources within and around this segment of roadway.

Right of Way Comments

Segment 3 is on land administered by the US Forest Service (USFS), on land held in fee by the State, and on private property. Occupancy of USFS land is either by special-use permit, or by easement.

Traffic Analysis

There were 15 accidents in this segment in the 10-year period. 7 of the accidents were in the series of curves from PM 4.5 (KP 1.4) to PM 4.8 (KP 1.5). In this 0.3-mile (0.5 kilometer) section, the accident rate is well over double the statewide average. There are rocks and trees as close as 3 ft (0.9 m) to the edge of the traveled-way.

	High	way Traf	ffic Volu	umes and Leve	of Service			
Averag	e Daily Traffic	Desig	n Hour	r Volumes	Volume to Ca	pacity Ratio	Level of	Service
004	750	:	2004	170	2004	0.09	2004	В
014	790	:	2014	180	2014	0.10	2014	В
024	830	:	2024	190	2024	0.10	2024	В
Rate p	er Million Vehicle I	Mile		Percent Ann	nual Traffic Grow	rth .	Percent Vehicl	e Volume
njury		1.15	Anr	nualTraffic Gro	wth (0-10 yrs)	0.5%	Trucks	4%
njury S	tatewide Expected	1.09	Anr	nual Traffic Gr	owth (10-20 yrs)	0.5%	RV's	5%
dent Ra	te	2.47	Dire	ectional Split	50/50		Buses	1%
wide E	xpected Rate	2.16	Ter	rain	Rolling			
	004 014 024 t Rate p njury njury S	Average Daily Traffic 004 750 014 790 024 830 t Rate per Million Vehicle I	Average Daily Traffic Design 004 750 24 750 24 830 25 Rate per Million Vehicle Mile 1.15 2.47 2.47	Average Daily Traffic Design Hour 004 750 2004 2014 790 2014 830 2024 Rate per Million Vehicle Mile njury 1.15 Ani njury Statewide Expected 1.09 Ani dent Rate 2.47 Direction of the state	Average Daily Traffic Design Hour Volumes 004 750 2004 170 014 790 2014 180 024 830 2024 190 1 Rate per Million Vehicle Mile Percent Annual Traffic Ground Statewide Expected 1.09 Annual Traffic Ground Statewide Expected 2.47 Directional Split	2004 170 2004 014 790 2014 180 2014 024 830 2024 190 2024 Rate per Million Vehicle Mile Percent Annual Traffic Grown injury 1.15 AnnualTraffic Growth (0-10 yrs) Injury Statewide Expected 1.09 Annual Traffic Growth (10-20 yrs) Ident Rate 2.47 Directional Split 50/50	Average Daily Traffic Design Hour Volumes Volume to Capacity Ratio 004 750 2004 170 2004 0.09 014 790 2014 180 2014 0.10 024 830 2024 190 2024 0.10 1 Rate per Million Vehicle Mile Percent Annual Traffic Growth njury 1.15 AnnualTraffic Growth (0-10 yrs) 0.5% njury Statewide Expected 1.09 Annual Traffic Growth (10-20 yrs) 0.5% dent Rate 2.47 Directional Split 50/50	Average Daily Traffic Design Hour Volumes Volume to Capacity Ratio Level of 2004 750 2004 170 2004 0.09 2004 0.10 2014 790 2014 180 2014 0.10 2014 0.20 2024 830 2024 190 2024 0.10 2024 2024 2024 2024 0.10 2024 2024 2024 2024 2024 2024 2024 20

County: Mono Route: 158 Segment: 3 Page: 12

 Length in km
 15.88
 Length mi:
 9.87

 KP Back
 9.61
 Back PM
 5.97

 KP Ahead
 25.49
 Ahead PM
 15.84

Present Facility Two-Lane Conventional

Present LOS B

Concept Facility Two-Lane Conventional

Concept LOS C

Ultimate Facility Two-Lane Conventional

Segment Location



Segment Description

Segment four begins at the winter closure gate near the power substation and ends at the end of the alignment at the north junction of SR 158 with US 395. Segment 4 primarily serves recreation users. Typically, after the first significant snowfall in winter through early spring, Segment 4 is closed due to avalanches. Avalanche prevention measures are not cost effective considering the low traffic demand for this segment and the risks involved. Segment 4 traverses a relatively straight alignment, with adequate site distance. The elevation for this segment ranges from 7,001 ft (2,134 m) to 7,257 ft (2,212 m).

Route Concept Improvement Recommendations

- 1). Upgrade the drainage system where necessary.
- 2). Widen shoulder widths to 4 ft (1.2 m) where environmental and geographic conditions allow.
- 3). Study potential vegetation control and guardrail additions along the Silver Lake area.

Programmed Projects

No Programmed projects are reported at the time of publication. A project initiation document is currently being prepared to provide and improve pedestrian and bicycle facilities in a safe and complementary way with other vehicle traffic while utilizing the principals of context sensitivity.

Functional Class	sificati	on: Major Collector	r	Roadway Widths	Un	its
High	way N	etwork Affiliation			Feet	Meters
National Hwy System	No	Scenic Highway	Officially Designated	Average Median Width	0	0
California Freeway _ Expressway System	No	National Truck Network	Kingpin to Rear Axle < 40 ft in Length	Average Shoulder Width	2	0.6
STRAHNET	No	Life Line	No	Average Lane Width	12	3.6
Regionally Significant	No	IRRS	IRRS			

County: Mono Route: 158 Segment: 4 Page: 13

RTPA/COG/MPO

Mono County LTC PO Box 347

Mammoth Lakes, CA 93546-0347

Transit Service/ Modal Options

Seasonal once-a-day bus service operated by the Yosemite Area Rapid Transit System is available connecting the June Lake area with Mammoth Lakes, Lee Vining, and Yosemite National Park.

Land Use

Land use adjacent to Segment 4 is recreational, including camping, fishing, hiking, skiing, snowmobile access, and swimming.

Air Quality Comments

This segment is classified by the State of California Air Resources Board for Non-Attainment Ozone, the source of Ozone is transported from the San Joaquin Valley air basin. For Particulate Matter 10, this segment is Moderate Non-Attainment.

Environmental Concerns

The Federal and/or State protected species that may be impacted within this segment are: the Northern Goshawk, Swainson's Hawk, Willow Flycatcher, Sierra Nevada Mountain Beaver, Prairie Falcon, Mono Lake Lupine, Mono Milk-Vetch, and Slender-leaved pondweed. Many of these species have been reported within the area and all proposed projects that impact undisturbed areas will require surveys to verify their existence within the area of work.

Other environmental concerns are the flood plains, water quality, stream crossings, the protection of both riparian and wetland communities, public facilities, and protection of the scenic resources within and around this segment of roadway.

Right of Way Comments

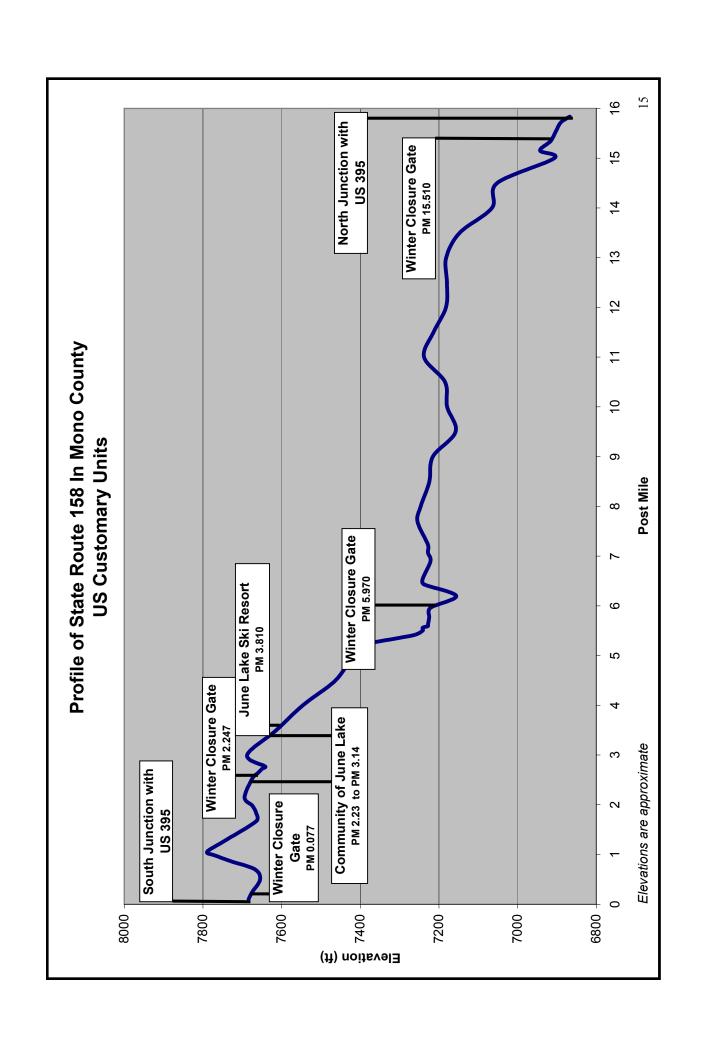
Segment 4 is on land administered by the US Forest Service (USFS), on land owned by the City of Los Angeles, and on land held in fee by the State. Except from 0.2 miles north of the winter closure gate near the power substation at Post Mile 6.2, (KP 9.9) to 0.3 miles north of Alger Creek, PM 7.3 (KP 11.8) the width of the right of way is defined.

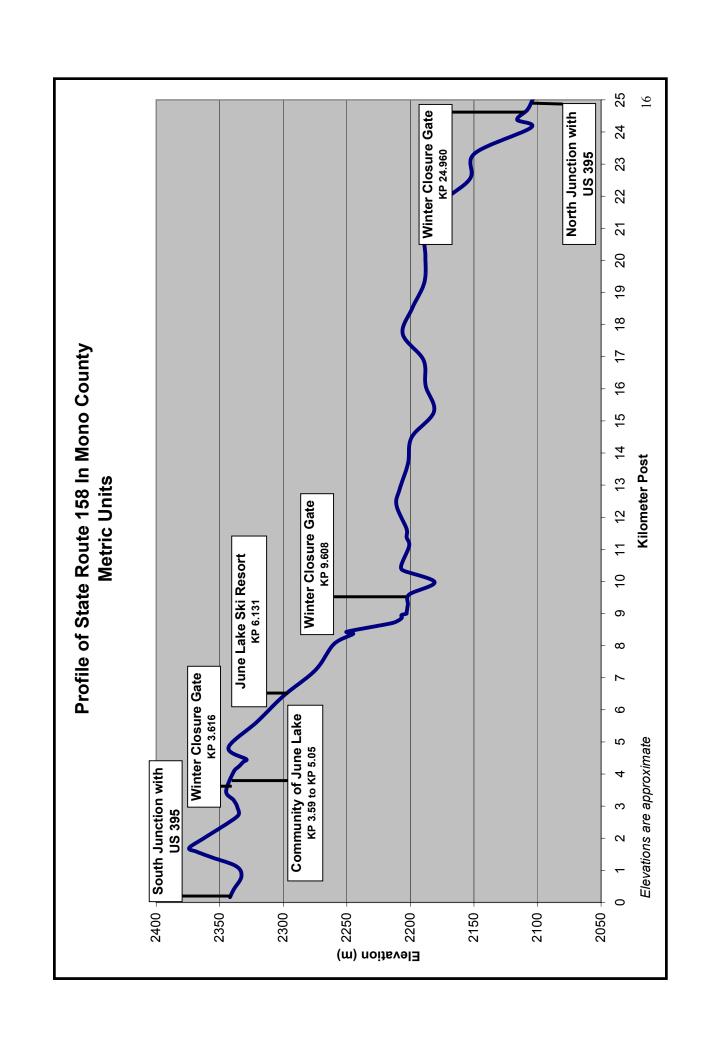
Traffic Analysis

There were 8 accidents in this segment for the 10-year period. Accident rates are typically one half the statewide average or less for this segment. There are slopes and trees as close as 3 ft (0.9 m) to the traveled-way. Concrete public utility boxes are within 11 ft (3.4 m) of the traveled way.

	High	way Traffic	Volumes and Leve	l of Service			
Annual Avera	ge Daily Traffic	Design F	lour Volumes	Volume to Ca	pacity Ratio	Level of	Service
2004	750	2004	4 170	2004	0.09	2004	В
2014	790	201	4 180	2014	0.10	2014	В
2024	830	202	4 190	2024	0.10	2024	В
Accident Rate	per Million Vehicle I	Viile	Percent Ann	ual Traffic Grow	rth	Percent Vehicle	e Volume
Fatality + Injury		0.42	AnnualTraffic Gro	wth (0-10 yrs)	0.5%	Trucks	4%
Fatality + Injury	Statewide Expected	0.97	Annual Traffic Gro	wth (10-20 yrs)	0.5%	RV's	5%
Total Accident R	ate	0.52	Directional Split	50/50		Buses	1%
Total Statewide I	Expected Rate	2.01	Terrain	Rolling			

County: Mono Route: 158 Segment: 4 Page: 14





GLOSSARY

Concept Facility Highway facility type and characteristics considered viable with

or without improvement within the 20-year planning period given financial, environmental, planning and engineering factors.

Concept LOS Highest and best Level of Service that can be achieved in the 20-

year planning period based on the concept facility.

Directional split The percentage of traffic in the peak direction compared to

traffic in both directions during the design hour.

Functional Classification Guided by Federal legislation, refers to a process by which

streets and highways are grouped into classes or systems according to the character of the service that is provided (i.e. Principal Arterial, Minor Arterial Roads, Collector Roads and

Local Roads).

Interregional Road System Statewide network of legislatively identified interregional routes,

outside urbanized areas, that provides access to, and links between, the state's economic centers, major recreational areas,

urban and rural regions.

Level of Service (LOS) A qualitative rating of the effectiveness of a transportation

system in serving travel. Letters A (best) through F (worst).

National Highway System Federal-designated system of major highways in each state.

Present Facility Highway type and general characteristics at the time of this

study.

Present LOS Existing Level of Service.

Programmed Projects Capacity-enhancing, safety and/or operational improvement

projects programmed through STIP or SHOPP.

Route Designations Identifies whether or not the subject segment of a route is

designated as being part of the National Highway System (NHS); Interregional Highway System (IRRS); California Freeway/Expressway (F & E) Eligible; Scenic Highway; National Truck Network (NTN); Terminal Access Route for the

National Truck Network; Strategic Highway Network (STRAHNET); and, Highways of Regional Significance.

ACRONYMS

AADT Average Annual Daily Traffic

ADT Average Daily Traffic

BLM Bureau of Land Management

Caltrans California Department of Transportation

IRRS Interregional Road System

KM Kilometer
LOS Level of Service

MNO Mono

NHS National Highway System NTN National Truck Network

PKM Post Kilometer PM Post Mile

RV Recreational Vehicle

SHOPP State Highway Operation and Protection Program

STAA Surface Transportation Assistance Act
STIP State Transportation Improvement Program

STRAHNET Strategic Highway Network
TCR Transportation Concept Report

USFS US Forest Service V/C Volume to Capacity

SOURCES OF INFORMATION

1996 Mono County Regional Transportation Plan (revised 2001)

1986 Caltrans Route Segment Report

2000 Mono County General Plan

District 9 Post Mile Log

Traffic Accident Surveillance and Analysis System Table B Accident Data